

**BELIEVE IT OR NOT!**

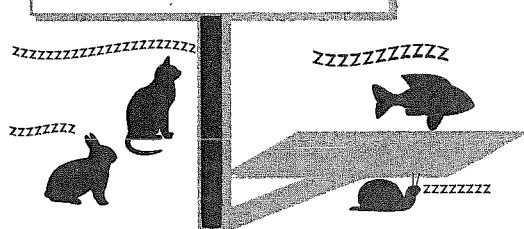
The body of a 70 kg person contains 7 mg of arsenic.

- How much arsenic would you expect to find in the body of an **85 kg** person?
- Simplify:  $x^{-3}$
- Find the opposite of  $-(n - m)$ .
- Do these points lie on a straight line?  
A  $(-3, 5)$     B  $(6, -4)$     C  $(0, -2)$

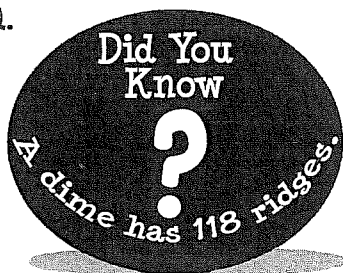
- A group of pet owners were surveyed about the sleeping habits of their pets. They reported a total of sixty-seven pets that snore. If the fact (below) is true of this group, how many pets were considered in the survey?

**Wacky Fact**

According to pet owners, seven percent of all pets snore.



1.



How many ridges are on \$688 worth of dimes?

- Change each to an exponential expression:  
 $\sqrt{x} =$                        $\sqrt[3]{12} =$
- Write this expression:  
Six times a number divided by four times the sum of another number and three.
- Evaluate for  $x = 22$  and  $y = -10$ .  
$$\frac{x+y}{2} + \frac{x-y}{8}$$

- Write a number in scientific notation to represent each fact.



- The human eye blinks 4,200,000 times a year. \_\_\_\_\_
- A red blood cell is one millionth of a square meter. \_\_\_\_\_
- American kids spend half a billion dollars a year on chewing gum. \_\_\_\_\_
- A cow produces two million glasses of milk in her lifetime. \_\_\_\_\_
- There are over one hundred billion galaxies in the universe. \_\_\_\_\_
- Dunkin' Donuts sells 2.3 billion donuts a year. \_\_\_\_\_

Name \_\_\_\_\_

Factor:  $a^3b + ab^2 - 3ab$

What is the difference?

three times the cube root of a number (x) minus six times the cube root of the same number

Simplify:  $\frac{12x^4y^3}{2xy^2}$

How many bees does it take to make a cup of honey?

(Conversion factor:  
1 C = 48 tsp)

## CURIOUS FACT!

- A bee produces  $\frac{1}{12}$  teaspoon of honey in its lifetime.

## INTERESTING FACTS...

- Wrigley's chewing gum was the first product to be scanned with a bar code. This was on June 26, 1974.
- The most overdue book ever tracked was borrowed from Sidney Sussex College in Cambridge, England. It was returned 288 years later.

5. Use the information on the sign above to answer the questions:

- How many days ago was the chewing gum scanned?
- If the library's overdue charge was five cents a day, about how much was the fine on the book?

Name \_\_\_\_\_

Does the expression below represent the cost of the bathroom?  
(See the sign.)

$$(\sqrt{49})(\sqrt[3]{125})(10^5)$$

## SHOCKING FACT!

The most expensive bathroom on record cost \$3.5 million to build.

Simplify:  $(5x^4 + y^6) - (3x^4 + 2y^6)$

Evaluate for  $c = 6$  and  $d = -4$ .

$$\frac{c^2}{(d+2)^3}$$

Solve:  $-10n + n - (-15n) + 12 = 27n$

5. Use the fact on the sign below to help solve the problem.

Assume that each of those hot dogs was served with 5 grams of mustard. How many 350-gram bottles of mustard would have been purchased to do the job of spicing up the dogs?

(Round to nearest whole number.)

## SURPRISING FACT

In the year 2000, Americans consumed 20 billion hot dogs.

### Wacky Fact

NINETY-FIVE PERCENT OF PEOPLE WHO EAT PEANUT BUTTER AND JELLY SANDWICHES PUT THE PEANUT BUTTER ON THE BREAD BEFORE THE JELLY.

1. A group of 575 people begins making peanut butter and jelly sandwiches. How many people do you expect would put the jelly on the bread before the peanut butter? (Round to the nearest whole number.)
2. Which has the greater value if  $x$  and  $y$  have the same value in each expression and  $x > 0$  and  $y > 2$ ?

$$\sqrt{81x^2}$$

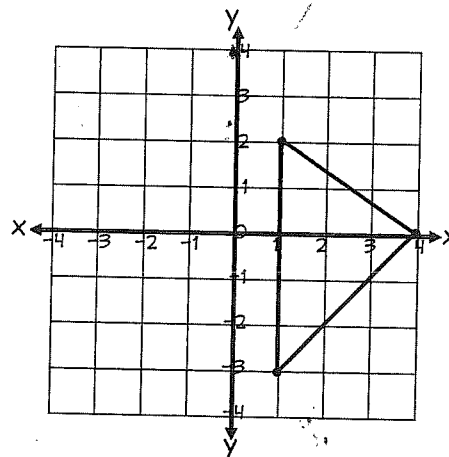
$$2x^2y$$

$$-xy^2$$

3. Is  $n = 5$  the correct solution to the equation below?

$$4\sqrt[3]{64} + n^2 = -6n + 71$$

4. Imagine the image of the triangle if it were reflected over the **y-axis**. Describe the coordinates for the three vertices.



## 5. Challenge Problem

*Strange, but Perhaps, True!*

According to some sources, the average (4 ounce) chocolate bar contains 8 insect legs!

Some people do not like their chocolate “bugged.” They feel two insect legs per bar is plenty. How much pure chocolate (if they could get it) would confectioners have to mix with 20 pounds of the “bugged” chocolate to get only two legs in a bar?

